Appl. No. 10/575,510

Amdt. dated Aug. 14, 2007

Reply to Office Action of May 14, 2007

Attorney Docket No. 1217-060907

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-8 (Canceled)

9. (Currently Amended) The surface protective sheet as claimed in claim-8 claim 12, wherein the base sheet and the adhesive layer are cut to have almost the same diameter as that of a semiconductor wafer to be stuck, and the portion on which an adhesive layer is formed are of almost concentric circles.

11. (Currently Amended) The surface protective sheet as claimed in claim 10 claim 12, wherein the core material film is polyethyleneterephthalate film.

12. (Currently Amended) The surface A surface protective sheet as elaimed in claim 10, wherein used for grinding a back surface of a semiconductor wafer, wherein:

one surface of a base sheet is provided with an opening portion having a diameter smaller than an outer diameter of a semiconductor wafer to be stuck, on said opening portion no adhesive layer being formed, and a portion which is provided around the opening portion and on which an adhesive layer is formed, wherein:

the adhesive layer is a double side coated adhesive sheet wherein adhesive layers are provided on both surfaces of a core material film, wherein:

one adhesive layer on the side facing the base sheet is an adhesive having strong adhesion strength and other adhesive layer on the side facing the wafer is an energy ray-curable adhesive which is cured by irradiation with energy rays to exhibit removability.

15. (Currently Amended) The method for grinding a semiconductor wafer as claimed in claim 14 claim 16, wherein the core material film is polyethyleneterephthalate film.

Appl. No. 10/575,510 Amdt. dated Aug. 14, 2007 Reply to Office Action of May 14, 2007 Attorney Docket No. 1217-060907

16. (Currently Amended) The method A method for grinding a semiconductor wafer as claimed in claim 14, comprising:

allowing a semiconductor wafer, on a circuit surface of which bumps are formed, to be in a surface-protected form wherein an adhesive layer having an opening portion with no adhesive corresponding to a portion of the wafer where the bumps are formed and an adhesive portion corresponding to an outer peripheral portion of the wafer where bumps are not formed is formed and a base sheet is laminated on the adhesive layer so as to cover the opening portion of the adhesive layer.

placing the semiconductor wafer of the surface-protected form on a fixing table in such a manner that the base sheet faces the fixing table, and

grinding a back surface of the semiconductor wafer, wherein:

the adhesive layer is a double side coated adhesive sheet wherein adhesive layers are provided on both surfaces of a core material film, and wherein:

wherein one adhesive layer on the side facing the base sheet is an adhesive having strong adhesion strength and other adhesive layer on the side facing the wafer is an energy ray-curable adhesive which is cured by irradiation with energy rays to exhibit removability.

17. (Currently Amended) The method A method for grinding a semiconductor wafer as claimed in claim 13, wherein comprising:

allowing a semiconductor wafer, on a circuit surface of which bumps are formed, to be in a surface-protected form wherein an adhesive layer having an opening portion with no adhesive corresponding to a portion of the wafer where the bumps are formed and an adhesive portion corresponding to an outer peripheral portion of the wafer where bumps are not formed is formed and a base sheet is laminated on the adhesive layer so as to cover the opening portion of the adhesive layer,

placing the semiconductor wafer of the surface-protected form on a fixing table in such a manner that the base sheet faces the fixing table, and

grinding a back surface of the semiconductor wafer, wherein:

the semiconductor wafer is allowed to have the surface-protected form by:

supplying the adhesive layer in such manner that both surface surfaces of the adhesive layer are laminated with release films of light-releasable type and heavy-releasable type, layer and the release film of light-releasable type are punched to form e that so that the adhesive layer is supported on the release film of heavy-releasable type,

Appl. No. 10/575,510 Amdt. dated Aug. 14, 2007 Reply to Office Action of May 14, 2007 Attorney Docket No. 1217-060907

peeling the release film of light-releasable type while adhering the exposed surface of the adhesive layer to the base sheet, and

peeling the release film of heavy-releasable type while adhering the exposed surface of the adhesive layer to the outer peripheral portion of the wafer.

- 20. (Currently Amended) The method for grinding a semiconductor wafer as claimed in claim 13 claim 17, wherein the height of each bump formed on the circuit surface is 50 µm or more and the bump arranged on the outermost side is positioned at a distance of 2 to 10 mm from the outer periphery of the wafer.
- 21. (Currently Amended) The method for grinding a semiconductor wafer as claimed in claim 13 claim 17, wherein a difference (Bt-At) between the height (Bt) of each bump and the thickness (At) of the adhesive layer is in the range of -5 to 50 µm.
- 22. (Currently Amended) The method A method for grinding a semiconductor wafer as claimed in claim 19, which further comprises the steps of comprising:

allowing a semiconductor wafer, on a circuit surface of which bumps are formed, to be in a surface-protected form wherein an adhesive layer having an opening portion with no adhesive corresponding to a portion of the wafer where the bumps are formed and an adhesive portion corresponding to an outer peripheral portion of the wafer where bumps are not formed is formed and a base sheet is laminated on the adhesive layer so as to cover the opening portion of the adhesive layer,

placing the semiconductor wafer of the surface-protected form on a fixing table in such a manner that the base sheet faces the fixing table, and

grinding a back surface of the semiconductor wafer, wherein:

the semiconductor wafer is allowed to have the surface-protected form by:

sticking the adhesive layer having an opening portion corresponding to a portion of the wafer where bumps are formed and an adhesive portion corresponding to an outer peripheral portion of the wafer where bumps are not formed, to the outer peripheral portion of the semiconductor wafer on a circuit surface of which bumps are formed, and

laminating the base sheet on the adhesive layer so as to cover the opening portion of the adhesive layer, and

Appl. No. 10/575,510 Amdt. dated Aug. 14, 2007 Reply to Office Action of May 14, 2007 Attorney Docket No. 1217-060907

supplying the adhesive layer in such manner that both surface of the adhesive layer are laminated with release films of light-releasable type and heavy-releasable type, wherein the adhesive layer and the release film of light-releasable type are punched to form the opening portion, so that the adhesive layer is supported on the release film of heavy releasable type.